

# FCC REPORT

## (5G NR)

**Applicant:** INFINIX MOBILITY LIMITED  
**Address of Applicant:** FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT  
**Equipment Under Test (EUT)**  
Product Name: Mobile Phone  
Model No.: X6815B  
Trade mark: Infinix  
**FCC ID:** 2AIZN-X6815B  
**Applicable standards:** FCC CFR Title 47 Part 2  
FCC CFR Title 47 Part 27  
**Date of sample receipt:** 13 Dec., 2021  
**Date of Test:** 14 Dec., 2021 to 10 Jan., 2022  
**Date of report issued:** 11 Jan., 2022  
**Test Result:** PASS\*

\*In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang  
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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## 2. Version

Version No.	Date	Description
00	11 Jan., 2022	Original

*Tested by:*

Mike.ou  
**Test Engineer**

*Date:*

11 Jan., 2022

*Reviewed by:*

Winner Zhang  
**Project Engineer**

*Date:*

11 Jan., 2022

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## 4. Test Summary

Test Items	Section in CFR 47	Result
RF Exposure (SAR)	Part 1.1307 Part 2.1093	Pass (Please refer to SAR Report)
RF Output Power Effective Radiated Power and Effective Isotropic Radiated Power	Part 2.1046 Part 27.50 (h)(2) Part 27.50 (j)(3) Part 27.50 (k)(3)	Pass
Peak-to-Average Ratio	Part 27.50 (j)(4) Part 27.50 (k)(4)	Pass
Occupied Bandwidth	Part 2.1049	Pass
Emission Bandwidth	Part 2.1049 Part 27.53(m) Part 27.53(i) Part 27.53(n)	Pass
Spurious Emissions at antenna Terminals & Band Edges Compliance	Part 2.1051 Part 27.53(m) Part 27.53(i) Part 27.53(n)	Pass
Field strength of spurious radiation	Part 2.1053 Part 27.53(m) Part 27.53(i) Part 27.53(n)	Pass
Frequency stability	Part 27.54 Part 2.1055(d)(2)	Pass
<b>Remark:</b> <i>Pass: The EUT complies with the essential requirements in the standard.</i>		
<b>Test Method:</b>	ANSI/TIA-603-E-2016 ANSI C63.26-2015	

## 5. General Information

### 5.1 Client Information

Applicant:	INFINIX MOBILITY LIMITED
Address:	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT
Manufacturer:	INFINIX MOBILITY LIMITED
Address:	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT
Factory:	SHENZHEN TECNO TECHNOLOGY CO., LTD.
Address:	101, Building 24, Waijing Industrial Park, Fumin Community, Fucheng Street, Longhua District, Shenzhen City, P.R.China

### 5.2 General Description of E.U.T.

Product Name:	Mobile Phone		
Model No.:	X6815B		
Operation Frequency range:	TDD n38:	TX: 2570MHz~2620MHz RX: 2570MHz~2620MHz	
	TDD n41:	TX: 2535MHz~2655MHz RX: 2535MHz~2655MHz	
	TDD n77:	TX: 3450MHz~3550MHz RX: 3450MHz~3550MHz	
	TDD n77:	TX: 3700MHz~3980MHz RX: 3700MHz~3980MHz	
	TDD n78:	TX: 3450MHz~3550MHz RX: 3450MHz~3550MHz	
	TDD n78:	TX: 3700MHz~3800MHz RX: 3700MHz~3800MHz	
Modulation type:	DFT_BPSK, DFT_QPSK, DFT_16-QAM, DFT_64QAM, DFT_256-QAM cp_QPSK, cp_16-QAM, cp_64QAM, cp_256-QAM		
SCS support:	15KHz & 30KHz		
5G NR Network mode:	SA: NR n38, n41, n77, n78 NSA(EN-DC): DC_5A_n78A, DC_41A_n78A, DC_66A_n78A		
Channel Bandwidths:	n38	SCS 15KHz	5MHz, 10MHz, 15MHz, 20MHz, 40MHz
		SCS 30KHz	10MHz, 15MHz, 20MHz, 40MHz
	n41	SCS 15KHz	10MHz, 15MHz, 20MHz, 30 MHz, 40MHz, 50MHz
		SCS 30KHz	10MHz, 15MHz, 20MHz, 30 MHz, 40MHz, 50MHz, 60MHz, 80 MHz, 90MHz, 100MHz
	n77	SCS 15KHz	10MHz, 15MHz, 20MHz, 25 MHz, 30 MHz, 40MHz, 50MHz
		SCS 30KHz	10MHz, 15MHz, 20MHz, 25MHz, 30 MHz, 40MHz, 50MHz, 60MHz, 80 MHz, 90MHz, 100MHz
	n78	SCS 15KHz	10MHz, 15MHz, 20MHz, 25 MHz, 30 MHz, 40MHz, 50MHz
		SCS 30KHz	10MHz, 15MHz, 20MHz, 25MHz, 30 MHz, 40MHz, 50MHz, 60MHz, 80 MHz, 90MHz, 100MHz
Antenna type:	Internal Antenna		
Antenna gain:	n38: 0.5dBi(declare by Applicant) n41: 0.5dBi(declare by Applicant) n77: 0.5 dBi(declare by Applicant) n78: 0.4 dBi(declare by Applicant)		
Power supply:	Rechargeable Li-ion Polymer Battery DC3.87V, 4900mAh		
AC adapter:	Model: U330XSA Input: AC100-240V, 50/60Hz, 1.5A		

	Output: DC 5.0V, 3.0A or 10V, 3.3A
Test Sample Condition:	The applicant provided engineering samples for staying in continuously transmitting for testing.

Operation Frequency List:

Test frequencies for NR operating band n38 and SCS 15 kHz

CBW [MHz]	carrierBandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetToCarrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absoluteFrequency SSB [ARFCN]	$k_{SSB}$	Offset Carrier CORESET#0 [RBs] Note 2	CORESET#0 Index (Offset [RBs]) Note 1	offsetToPointA (SIB1) [PRBs] Note 1	
5	25	Downlink & Uplink	Low	2572.5	514500	2570.25	514050	0	15	6432	514590	0	1	2 (4)	5
			Mid	2592.5	518500	2571.89	514378	102		6479	518410	0	0	0 (0)	102
		High	2617.5	523500	2524.53	504908	504	6543		523470	8	1	0 (0)	505	
10	52	Downlink & Uplink	Low	2575	515000	2570.32	514084	0	30	6439	515090	6	2	1 (8)	8
			Mid	2595	519000	2571.96	514392	102		6486	518910	6	1	0 (2)	105
		High	2615	523000	2519.6	503920	504	6536		522970	2	3	0 (2)	509	
15	79	Downlink & Uplink	Low	2577.5	515500	2570.39	514078	0	30	6437	515050	0	1	1 (8)	7
			Mid	2595	519000	2589.53	513908	102		6480	518430	8	1	0 (2)	105
		High	2612.5	522500	2514.67	502934	504	6526		522050	0	1	1 (8)	511	
20	106	Downlink & Uplink	Low	2580	516000	2570.46	514092	0	30	6438	515070	2	1	1 (8)	7
			Mid	2595	519000	2567.1	513420	102		6474	517950	10	1	0 (2)	105
		High	2610	522000	2509.74	501948	504	6513		521070	2	1	1 (8)	511	
40	216	Downlink & Uplink	Low	2590	518000	2570.56	514112	0	30	6439	515090	2	1	1 (8)	7
			Mid	2595	519000	2567.2	511440	102		6450	516030	6	3	0 (2)	107
		High	2600	520000	2489.84	497988	504	6481		516970	10	1	0 (2)	507	

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-1 for SSB\_SCS = 15kHz and Table 13-3 for SSB\_SCS=30kHz in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter  $\Delta F_{\text{OffsetCORESET-0-Carrier}}$  in Annex C expressed in number of common RBs.

Test frequencies for NR operating band n38 and SCS 30 kHz

Table 4.3.1.1.1.38-2: Test frequencies for NR operating band n38 and SCS 30 kHz

CBW [MHz]	carrierBandwidth [PRBs]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	point A [MHz]	absoluteFrequency PointA [ARFCN]	offsetToCarrier [Carrier PRBs]	SS block SCS [kHz]	GSCN	absoluteFrequency SSB [ARFCN]	$k_{SSB}$	Offset Carrier CORESET#0 [RBs] Note 2	CORESET#0 Index (Offset [RBs]) Note 1	offsetToPointA (SIB1) [PRBs] Note 1	
10	24	Downlink & Uplink	Low	2575	515000	2570.68	514136	0	30	6439	515090	6	0	3 (3)	6
			Mid	2595	519000	2553.96	510792	102		6486	518910	18	0	0 (0)	204
		High	2615	523000	2429.24	485848	504	6536		522970	14	0	1 (1)	1010	
15	38	Downlink & Uplink	Low	2577.5	515500	2570.66	514132	0	30	6437	515050	18	0	2 (2)	4
			Mid	2595	519000	2551.44	510288	102		6480	518430	2	0	1 (1)	206
		High	2612.5	522500	2424.22	484844	504	6526		522050	18	0	2 (2)	1012	
20	51	Downlink & Uplink	Low	2580	516000	2570.82	514164	0	30	6438	515070	14	0	2 (2)	4
			Mid	2595	519000	2549.1	509820	102		6474	517950	22	0	0 (0)	204
		High	2610	522000	2419.38	483876	504	6513		521070	14	0	2 (2)	1012	
40	106	Downlink & Uplink	Low	2590	518000	2570.92	514184	0	30	6439	515090	14	0	2 (2)	4
			Mid	2595	519000	2539.2	507840	102		6450	516030	18	0	1 (1)	206
		High	2600	520000	2399.48	479896	504	6461		516970	22	0	0 (0)	1008	

Note 1: The CORESET#0 Index and the associated CORESET#0 Offset refers to Table 13-4 in TS 38.213 [22]. The value of CORESET#0 Index is signalled in controlResourceSetZero (pdcch-ConfigSIB1) in the MIB. The offsetToPointA IE is expressed in units of resource blocks assuming 15 kHz subcarrier spacing for FR1 and 60 kHz subcarrier spacing for FR2.

Note 2: The parameter Offset Carrier CORESET#0 specifies the offset from the lowest subcarrier of the carrier and the lowest subcarrier of CORESET#0. It corresponds to the parameter  $\Delta F_{\text{OffsetCORESET-0-Carrier}}$  in Annex C expressed in number of common RBs.

Test frequencies for NR operating band n41 and SCS 15 kHz

Bandwidth [MHz]	Range	Carrier centre [MHz]	Carrier centre [ARFCN]	SS block SCS [KHz]
10	Downlink & Uplink	Low	2540.01	30
		Mid	2595	
		High	2649.99	
15	Downlink & Uplink	Low	2542.5	30
		Mid	2595	
		High	2647.5	
20	Downlink & Uplink	Low	2545.02	30
		Mid	2595	
		High	2644.98	
30	Downlink & Uplink	Low	2550	30
		Mid	2595	
		High	2640	
40	Downlink & Uplink	Low	2555.01	30
		Mid	2595	
		High	2634.99	
50	Downlink & Uplink	Low	2560.02	30
		Mid	2595	
		High	2629.98	



**Test frequencies for NR operating band n41 and SCS 30 kHz**

<b>Bandwidth [MHz]</b>	<b>Range</b>		<b>Carrier centre [MHz]</b>	<b>Carrier centre [ARFCN]</b>	<b>SS block SCS [KHz]</b>
10	Downlink & Uplink	Low	2540.01	508002	30
		Mid	2595	519000	
		High	2649.99	529998	
15	Downlink & Uplink	Low	2542.5	508500	30
		Mid	2595	519000	
		High	2647.5	529500	
20	Downlink & Uplink	Low	2545.020	509004	30
		Mid	2595	519000	
		High	2644.98	528996	
30	Downlink & Uplink	Low	2550	510000	30
		Mid	2595	519000	
		High	2640	528000	
40	Downlink & Uplink	Low	2555.01	511002	30
		Mid	2595	519000	
		High	2634.99	526998	
50	Downlink & Uplink	Low	2560.02	512004	30
		Mid	2595	519000	
		High	2629.98	525996	
60	Downlink & Uplink	Low	2565	513000	30
		Mid	2595	519000	
		High	2625	525000	
80	Downlink & Uplink	Low	2575.02	515004	30
		Mid	2595	519000	
		High	2614.98	522996	
90	Downlink & Uplink	Low	2580	516000	30
		Mid	2595	519000	
		High	2610	522000	
100	Downlink & Uplink	Low	2585.01	517002	30
		Mid	2595	519000	
		High	2604.99	520998	

**Test frequencies for NR operating band n77(3450MHz~3550MHz) and SCS 15 kHz**

Bandwidth [MHz]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	SS block SCS [KHz]
10	Downlink & Uplink	Low	3455.01	630334	15
		Mid	3500.01	633334	
		High	3544.98	636332	
15	Downlink & Uplink	Low	3457.5	630500	15
		Mid	3500.01	633334	
		High	3542.49	636166	
20	Downlink & Uplink	Low	3460.02	630668	15
		Mid	3500.01	633334	
		High	3540	636000	
30	Downlink & Uplink	Low	3465	631000	15
		Mid	3500.01	633334	
		High	3534.99	635666	
40	Downlink & Uplink	Low	3470.01	631334	15
		Mid	3500.01	633334	
		High	3529.98	635332	
50	Downlink & Uplink	Low	3475.02	631668	15
		Mid	3500.01	633334	
		High	3525	635000	

**Test frequencies for NR operating band n77(3450MHz~3550MHz) and SCS 30 kHz**

Bandwidth [MHz]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	SS block SCS [KHz]
10	Downlink & Uplink	Low	3455.01	630334	30
		Mid	3500.01	633334	
		High	3544.98	636332	
15	Downlink & Uplink	Low	3457.5	630500	30
		Mid	3500.01	633334	
		High	3542.49	636166	
20	Downlink & Uplink	Low	3460.02	630668	30
		Mid	3500.01	633334	
		High	3540	636000	
30	Downlink & Uplink	Low	3465	631000	30
		Mid	3500.01	633334	
		High	3534.99	635666	
40	Downlink & Uplink	Low	3470.01	631334	30
		Mid	3500.01	633334	
		High	3529.98	635332	
50	Downlink & Uplink	Low	3475.02	631668	30
		Mid	3500.01	633334	
		High	3525	635000	
60	Downlink & Uplink	Low	3480	632000	30
		Mid	3500.01	633334	
		High	3519.99	634666	
80	Downlink & Uplink	Low	3490.02	632668	30
		Mid	3500.01	633334	
		High	3510	634000	
90	Downlink & Uplink	Low	3495	633000	30
		Mid	3500.01	633334	
		High	3504.99	633666	
100	Downlink & Uplink	Mid	3500.01	633334	30

**Test frequencies for NR operating band n77(3700MHz~3980MHz) and SCS 15 kHz**

Bandwidth [MHz]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	SS block SCS [KHz]
10	Downlink & Uplink	Low	3705	647000	15
		Mid	3840	656000	
		High	3975	665000	
15	Downlink & Uplink	Low	3707.52	647168	15
		Mid	3840	656000	
		High	3972.48	664832	
20	Downlink & Uplink	Low	3710.01	647334	15
		Mid	3840	656000	
		High	3969.99	664666	
30	Downlink & Uplink	Low	3715.02	647668	15
		Mid	3840	656000	
		High	3964.98	664332	
40	Downlink & Uplink	Low	3720	648000	15
		Mid	3840	656000	
		High	3960	664000	
50	Downlink & Uplink	Low	3725.01	648334	15
		Mid	3840	656000	
		High	3954.99	663666	

**Test frequencies for NR operating band n77(3700MHz~3980MHz) and SCS 30 kHz**

Bandwidth [MHz]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	SS block SCS [KHz]
10	Downlink & Uplink	Low	3705	647000	30
		Mid	3840	656000	
		High	3975	665000	
15	Downlink & Uplink	Low	3707.52	647168	30
		Mid	3840	656000	
		High	3972.48	664832	
20	Downlink & Uplink	Low	3710.01	647334	30
		Mid	3840	656000	
		High	3969.99	664666	
30	Downlink & Uplink	Low	3715.02	647668	30
		Mid	3840	656000	
		High	3964.98	664332	
40	Downlink & Uplink	Low	3720	648000	30
		Mid	3840	656000	
		High	3960	664000	
50	Downlink & Uplink	Low	3725.01	648334	30
		Mid	3840	656000	
		High	3954.99	663666	
60	Downlink & Uplink	Low	3730.02	648668	30
		Mid	3840	656000	
		High	3949.98	663332	
80	Downlink & Uplink	Low	3740.01	649334	30
		Mid	3840	656000	
		High	3939.99	662666	
90	Downlink & Uplink	Low	3745.02	649668	30
		Mid	3840	656000	
		High	3934.98	662332	
100	Downlink & Uplink	Low	3750	650000	30
		Mid	3840	656000	
		High	3930	662000	

**Test frequencies for NR operating band n78(3450MHz~3550MHz) and SCS 15 kHz**

Bandwidth [MHz]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	SS block SCS [KHz]
10	Downlink & Uplink	Low	3455.01	630334	15
		Mid	3500.01	633334	
		High	3544.98	636332	
15	Downlink & Uplink	Low	3457.5	630500	15
		Mid	3500.01	633334	
		High	3542.49	636166	
20	Downlink & Uplink	Low	3460.02	630668	15
		Mid	3500.01	633334	
		High	3540	636000	
30	Downlink & Uplink	Low	3465	631000	15
		Mid	3500.01	633334	
		High	3534.99	635666	
40	Downlink & Uplink	Low	3470.01	631334	15
		Mid	3500.01	633334	
		High	3529.98	635332	
50	Downlink & Uplink	Low	3475.02	631668	15
		Mid	3500.01	633334	
		High	3525	635000	

**Test frequencies for NR operating band n78(3450MHz~3550MHz) and SCS 30 kHz**

Bandwidth [MHz]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	SS block SCS [KHz]
10	Downlink & Uplink	Low	3455.01	630334	30
		Mid	3500.01	633334	
		High	3544.98	636332	
15	Downlink & Uplink	Low	3457.5	630500	30
		Mid	3500.01	633334	
		High	3542.49	636166	
20	Downlink & Uplink	Low	3460.02	630668	30
		Mid	3500.01	633334	
		High	3540	636000	
30	Downlink & Uplink	Low	3465	631000	30
		Mid	3500.01	633334	
		High	3534.99	635666	
40	Downlink & Uplink	Low	3470.01	631334	30
		Mid	3500.01	633334	
		High	3529.98	635332	
50	Downlink & Uplink	Low	3475.02	631668	30
		Mid	3500.01	633334	
		High	3525	635000	
60	Downlink & Uplink	Low	3480	632000	30
		Mid	3500.01	633334	
		High	3519.99	634666	
80	Downlink & Uplink	Low	3490.02	632668	30
		Mid	3500.01	633334	
		High	3510	634000	
90	Downlink & Uplink	Low	3495	633000	30
		Mid	3500.01	633334	
		High	3504.99	633666	
100	Downlink & Uplink	Mid	3500.01	633334	30

**Test frequencies for NR operating band n78(3700MHz~3800MHz) and SCS 15 kHz**

Bandwidth [MHz]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	SS block SCS [KHz]
10	Downlink & Uplink	Low	3705	647000	15
		Mid	3750	650000	
		High	3795	653000	
15	Downlink & Uplink	Low	3707.52	647168	15
		Mid	3750	650000	
		High	3792.48	652832	
20	Downlink & Uplink	Low	3710.01	647334	15
		Mid	3750	650000	
		High	3789.99	652666	
30	Downlink & Uplink	Low	3715.02	647668	15
		Mid	3750	650000	
		High	3784.98	652332	
40	Downlink & Uplink	Low	3720	648000	15
		Mid	3750	650000	
		High	3780	652000	
50	Downlink & Uplink	Low	3725.01	648334	15
		Mid	3750	650000	
		High	3774.99	651666	



**Test frequencies for NR operating band n78(3700MHz~3800MHz) and SCS 30 kHz**

Bandwidth [MHz]	Range		Carrier centre [MHz]	Carrier centre [ARFCN]	SS block SCS [KHz]
10	Downlink & Uplink	Low	3705	647000	30
		Mid	3750	650000	
		High	3795	653000	
15	Downlink & Uplink	Low	3707.52	647168	30
		Mid	3750	650000	
		High	3792.48	652832	
20	Downlink & Uplink	Low	3710.01	647334	30
		Mid	3750	650000	
		High	3789.99	652666	
30	Downlink & Uplink	Low	3715.02	647668	30
		Mid	3750	650000	
		High	3784.98	652332	
40	Downlink & Uplink	Low	3720	648000	30
		Mid	3750	650000	
		High	3780	652000	
50	Downlink & Uplink	Low	3725.01	648334	30
		Mid	3750	650000	
		High	3774.99	651666	
60	Downlink & Uplink	Low	3730.02	648668	30
		Mid	3750	650000	
		High	3769.98	651332	
80	Downlink & Uplink	Low	3740.01	649334	30
		Mid	3750	650000	
		High	3759.99	650666	
90	Downlink & Uplink	Low	3745.02	649668	30
		Mid	3750	650000	
		High	3754.98	650332	
100	Downlink & Uplink	Low	/	/	30
		Mid	3750	650000	
		High	/	/	

**Note: 5G NR n78(3450~3500MHz) and (3700~3800MHz) covered by 5G NR n77. Because they are with the same output power and supported bandwidths**

### 5.3 Test environment and mode, and test samples plans

Operating Environment:	
Temperature:	Normal: 15°C ~ 35°C, Extreme: -30°C ~ +50°C
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1008 mbar
Voltage:	Nominal: 3.87Vdc, Extreme: Low 3.5Vdc, High 4.45Vdc
Test mode:	
TM1	DFT-s-Pi/2-BPSK modulation
TM2	DFT-s-QPSK modulation
TM3	DFT-s-16QAM modulation
TM4	DFT-s-64QAM modulation
TM5	DFT-s-256QAM modulation
TM6	CP-QPSK modulation
TM7	CP-16QAM modulation
TM8	CP-64QAM modulation
TM9	CP-256QAM modulation
Test Samples Plans:	
Samples Number	Used for Test Items
3#	Conducted measurements test method
1#	Radiated measurements test method
2#	EUT constructional details
Remark: The EUT has been tested under continuous transmitting mode. Channel Low, Mid and High for each type band with rated data rate were chosen for full testing. The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for these modes. Just the worst case position (H mode) shown in report.	

### 5.4 Description of Support Units

Test Equipment	Manufacturer	Model No.	Serial No.
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY60192444

### 5.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Radiated Emission (9kHz ~ 30MHz) (3m SAC)	±3.13 dB
Radiated Emission (30MHz ~ 1000MHz) (3m SAC)	±4.45 dB
Radiated Emission (1GHz ~ 18GHz) (3m SAC)	±5.34 dB
Radiated Emission (18GHz ~ 40GHz) (3m SAC)	±5.34 dB
<b>Note:</b> The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.26-2015. All the measurement uncertainty value were shown with a coverage k=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.	

### 5.6 Related Submittal(s) / Grant (s)

This is an original grant, no related submittals and grants.
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### 5.7 Additions to, deviations, or exclusions from the method

No
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## 5.8 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

- **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

## 5.9 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: <http://www.ccis-cb.com>

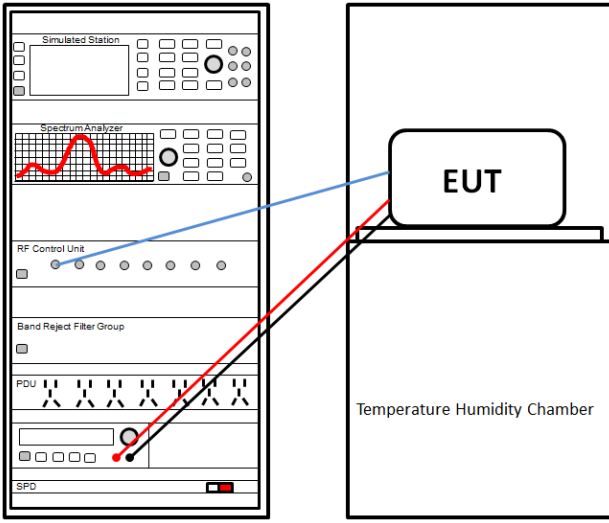
## 5.10 Test Instruments list

<b>Radiated Emission:</b>					
<b>Test Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Management Number</b>	<b>Cal.Date (mm-dd-yy)</b>	<b>Cal. Due date (mm-dd-yy)</b>
3m SAC	SAEMC	9m*6m*6m	WXJ001-1	01-19-2021	01-18-2024
BiConiLog Antenna	SCHWARZBECK	VULB9163	WXJ002	03-03-2021	03-02-2022
Biconical Antenna	SCHWARZBECK	VUBA9117	WXJ002-1	06-20-2021	06-19-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	WXJ002-2	03-03-2021	03-02-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	WXJ002-3	06-18-2021	06-17-2022
Loop Antenna	SCHWARZBECK	FMZB 1519 B	WXJ002-4	03-07-2021	03-06-2022
Pre-amplifier (30MHz ~ 1GHz)	HP	8447D	WXG001-2	03-07-2021	03-06-2022
Pre-amplifier (1GHz ~ 18GHz)	SKET	LNPA_0118G-50	WXG001-3	03-07-2021	03-06-2022
Pre-amplifier (18GHz ~ 40GHz)	RF System	TRLA-180400G45B	WXG001-9	03-07-2021	03-06-2022
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP30	WXJ004	03-03-2021	03-02-2022
Spectrum Analyzer	KEYSIGHT	N9010B	WXJ004-2	11-27-2020	11-26-2021
Signal Generator	Agilent	N5173B	WXJ006-7	03-25-2021	03-24-2022
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY60192444	11-27-2020	11-26-2021
Coaxial Cable (30MHz ~ 1GHz)	JYT	JYT3M-1G-NN-8M	WXG001-4	03-07-2021	03-06-2022
Coaxial Cable (1GHz ~ 18GHz)	JYT	JYT3M-18G-NN-8M	WXG001-5	03-07-2021	03-06-2022
Coaxial Cable (9kHz ~ 30MHz)	JYT	JYT3M-1G-BB-5M	WXG001-6	03-07-2021	03-06-2022
Coaxial Cable (1GHz ~ 18GHz)	JYT	JYT3M-40G-SS-8M	WXG001-7	03-07-2021	03-06-2022
RF Switch Unit	Tonscend	JS0806-F	WXJ089	N/A	
Test Software	Tonscend	TS+	Version: 3.0.0.1		

<b>Conducted method:</b>					
<b>Test Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Date (mm-dd-yy)</b>	<b>Cal. Due date (mm-dd-yy)</b>
Spectrum Analyzer	KEYSIGHT	N9010B	MY60240215	10-27-2021	10-26-2022
MXG Vector Signal Generator	KEYSIGHT	N5182B	MY59100991	10-27-2021	10-26-2022
EXG Analog Signal Generator	KEYSIGHT	N5173B	MY59100792	10-27-2021	10-26-2022
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY60192444	10-27-2021	10-26-2022
RF Control Box	MWRF-test	MW400-RFCB	MW201015JYT	N/A	N/A
Automatic Filter Box	MWRF-test	MW400-SFCB1	MW201018JYT-1	N/A	N/A
Automatic Filter Box	MWRF-test	MW400-SFCB2	MW201018JYT-2	N/A	N/A
Test Software	MWRFTTEST	MTS 8200 NR	Version: 2.0.0.0		
DC Power Supply	KEYSIGHT	E3642A	MY60266189	11-27-2020	11-26-2023
Temperature Humidity Chamber	Zhongzhi	CZ-C-150D	ZH16491	09-23-2020	09-22-2023

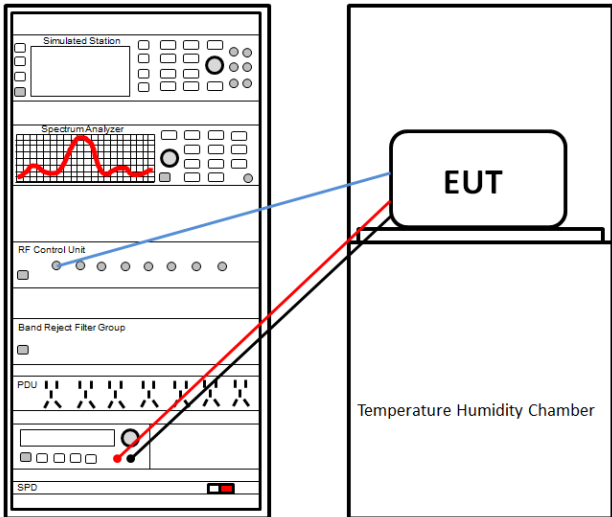
## 6. Test results

### 6.1 Conducted Output Power, ERP and EIRP

Test Requirement:	Part 27.50 (h)(2)
Limit:	5G NR n38, n41: 2W, n77: 1W, n78: 1W
Test Setup:	 <p>The diagram illustrates the test setup. On the left is a rack of test equipment including a Simulated Station, a Spectrum Analyzer (displaying a red waveform), an RF Control Unit, a Band Reject Filter Group, a PDU, and an SPD. On the right is a Temperature Humidity Chamber containing the EUT (Equipment Under Test). Red and blue lines indicate the connections between the equipment and the EUT.</p>
Test Procedure:	The transmitter output was connected to a calibrated attenuator, the other end of which was connected to the E7515B. Transmitter output power was read off in dBm.
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

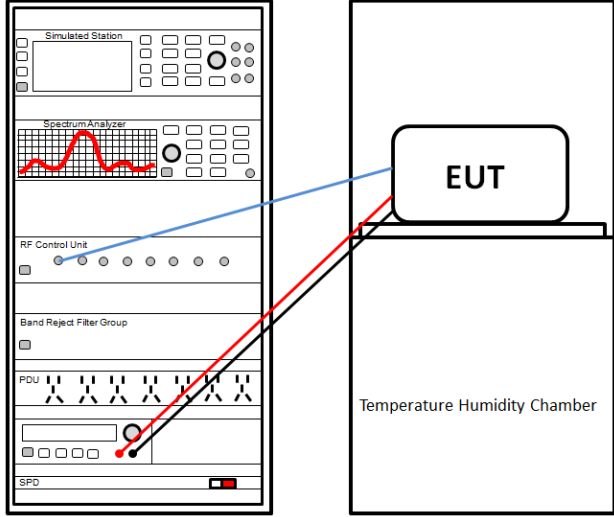
**Measurement Data:** Refer to Section 1 of Appendix A –5G NR

## 6.2 Peak-to-Average Ratio

Test Requirement:	Part 27.50(d)(5)
Limit:	The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.
Test Setup:	
Test Procedure:	<ol style="list-style-type: none"> <li>1 The RF output of the transceiver was connected to a E7515B through appropriate attenuation.</li> <li>2 Set the CCDF option in spectrum analyzer, <math>RBW \geq OBW</math>,</li> <li>3 Set the EUT working in highest power level, measured and recorded the 0.1% as PAPR level.</li> <li>4 Repeat step 1~3 at other frequency and modulations.</li> </ol>
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

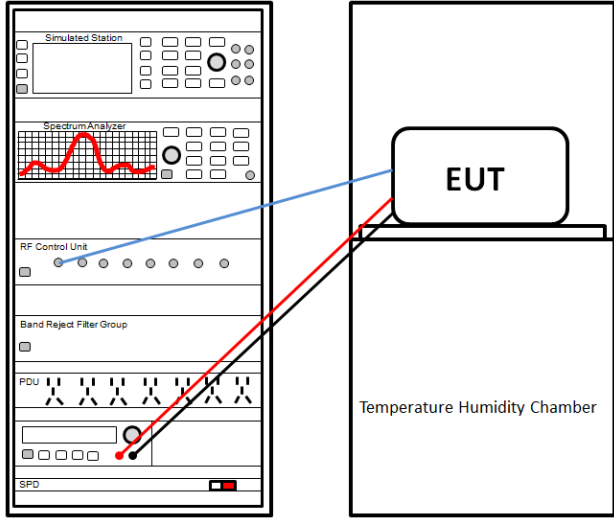
**Measurement Data:** Refer to Section 3 of Appendix A –5G NR

### 6.3 Occupy Bandwidth

Test Requirement:	Part 2.1049, Part 27.53(m), Part 27.53(i), Part 27.53(n)
Test Setup:	 <p>The diagram illustrates the test setup. On the left is a rack of test equipment including a Simulated Station, a Spectrum Analyzer (displaying a red signal trace), an RF Control Unit, a Band Reject Filter Group, a PDU, and an SPD. On the right is a Temperature Humidity Chamber containing the EUT (Equipment Under Test). A blue line connects the Spectrum Analyzer to the EUT, and a red line connects the RF Control Unit to the EUT.</p>
Test Procedure:	<ol style="list-style-type: none"> <li>1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer</li> <li>2. RBW was set to about 1% ~ 5% of emission BW, VBW= 3 times RBW.</li> <li>3. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.</li> </ol>
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

**Measurement Data:** Refer to Section 4 of Appendix A –5G NR

### 6.4 Out of band emission at antenna terminals

Test Requirement:	Part 27.53(m)
Limit:	<p>5G NR n38/n41:            For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz.</p> <p>n77/78            For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz.</p>
Test Setup:	
Test Procedure:	<ol style="list-style-type: none"> <li>1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.</li> <li>2 For the out of band: RBW =1 KHz, VBW=3 KHz, Start=9 KHz, Stop= 150 KHz; RBW =10 KHz, VBW=30 KHz, Start=150 KHz, Stop= 30 MHz; RBW =100 KHz, VBW=300 KHz, Start=30MHz, Stop= 1GHz; RBW =1 MHz, VBW=3 MHz, Start=1 GHz, Stop= 10th harmonic;.</li> <li>3 Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.</li> </ol>
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	Pre-scan all RB Size and offset, and found the RB Size and offset of worst case, so the report shows only the worst case test data.

**Measurement Data:**

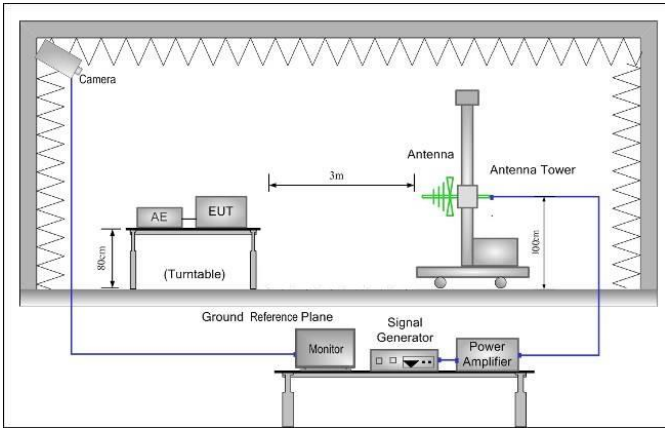
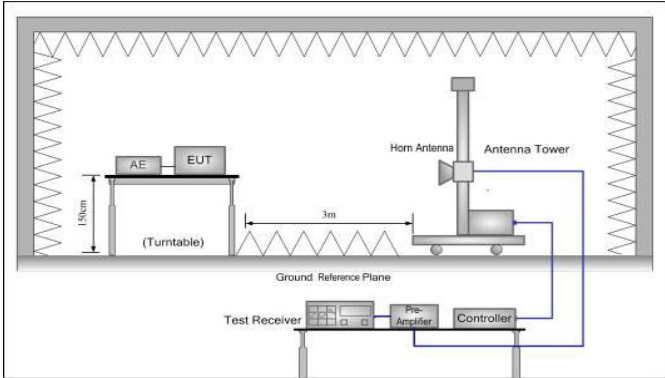
**Band edge emission:** Refer to Section 5 of Appendix A –5G NR

**Spurious emission:** Refer to Section 6 of Appendix A –5G NR





### 6.5 Field strength of spurious radiation measurement

<p>Test Requirement:</p>	<p>Part 2.1053, Part 27.53(m), Part 27.53(n), Part 27.53(i)</p>
<p>Limit:</p>	<p>5G NR n77, n78: -13dBm 5G NR n38, n41: For mobile digital stations, the attenuation factor shall be not less than <math>40 + 10 \log (P)</math> dB on all frequencies between the channel edge and 5 megahertz from the channel edge, <math>43 + 10 \log (P)</math> dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and <math>55 + 10 \log (P)</math> dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than <math>43 + 10 \log (P)</math> dB on all frequencies between 2490.5 MHz and 2496 MHz and <math>55 + 10 \log (P)</math> dB at or below 2490.5 MHz.</p>
<p>Test setup:</p>	<p>Below 1GHz</p>  <p>Above 1GHz</p> 
<p>Test Procedure:</p>	<ol style="list-style-type: none"> <li>1. The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter camber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.</li> <li>2. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.</li> <li>3. The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.</li> <li>4. The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the</li> </ol>

	spurious emissions frequency. ERP / EIRP = S.G. output (dBm) + Antenna Gain(dB/dBi) – Cable Loss (dB)
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details.
Test results:	Passed
Remark:	Pre-Scan all modulation and all Bandwidth, And the report only reflects the worst mode

**Measurement Data:**

Band n38(5MHz)-SCS 15kHz						
5MHz(1@0) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5145.00	-49.61	4.66	-44.95	-25.00	19.95	Vertical
7717.50	-51.47	13.24	-38.23	-25.00	13.23	Vertical
10290.00	-51.63	18.46	-33.17	-25.00	8.17	Vertical
5145.00	-49.86	4.66	-45.20	-25.00	20.20	Horizontal
7717.50	-51.47	13.24	-38.23	-25.00	13.23	Horizontal
10290.00	-51.81	18.46	-33.35	-25.00	8.35	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5190.00	-50.09	4.76	-45.33	-25.00	20.33	Vertical
7785.00	-50.99	13.48	-37.51	-25.00	12.51	Vertical
10380.00	-51.97	17.85	-34.12	-25.00	9.12	Vertical
5190.00	-49.53	4.76	-44.77	-25.00	19.77	Horizontal
7785.00	-51.66	13.48	-38.18	-25.00	13.18	Horizontal
10380.00	-51.61	17.85	-33.76	-25.00	8.76	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5235.00	-49.40	4.95	-44.45	-25.00	19.45	Vertical
7852.50	-51.06	13.48	-37.58	-25.00	12.58	Vertical
10470.00	-51.53	18.39	-33.14	-25.00	8.14	Vertical
5235.00	-49.77	4.95	-44.82	-25.00	19.82	Horizontal
7852.50	-51.63	13.48	-38.15	-25.00	13.15	Horizontal
10470.00	-52.23	18.39	-33.84	-25.00	8.84	Horizontal

Band n38(20MHz)-SCS 15kHz						
40MHz(1@0) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5180.00	-49.45	4.71	-44.74	-25.00	19.74	Vertical
7770.00	-51.21	13.32	-37.89	-25.00	12.89	Vertical
10360.00	-51.87	18.30	-33.57	-25.00	8.57	Vertical
5180.00	-50.34	4.71	-45.63	-25.00	20.63	Horizontal
7770.00	-51.73	13.32	-38.41	-25.00	13.41	Horizontal
10360.00	-52.17	18.30	-33.87	-25.00	8.87	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5190.00	-49.03	4.76	-44.27	-25.00	19.27	Vertical
7785.00	-50.85	13.48	-37.37	-25.00	12.37	Vertical
10380.00	-52.07	17.85	-34.22	-25.00	9.22	Vertical
5190.00	-50.11	4.76	-45.35	-25.00	20.35	Horizontal
7785.00	-52.02	13.48	-38.54	-25.00	13.54	Horizontal
10380.00	-52.36	17.85	-34.51	-25.00	9.51	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5200.00	-49.11	4.86	-44.25	-25.00	19.25	Vertical
7800.00	-50.71	13.49	-37.22	-25.00	12.22	Vertical
10400.00	-51.60	18.21	-33.39	-25.00	8.39	Vertical
5200.00	-50.34	4.86	-45.48	-25.00	20.48	Horizontal
7800.00	-51.57	13.49	-38.08	-25.00	13.08	Horizontal
10400.00	-52.42	18.21	-34.21	-25.00	9.21	Horizontal

Band n38(10MHz)-SCS 30kHz						
10MHz(1@0) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5150.00	-49.69	4.66	-45.03	-25.00	20.03	Vertical
7725.00	-51.28	13.24	-38.04	-25.00	13.04	Vertical
10300.00	-51.67	18.46	-33.21	-25.00	8.21	Vertical
5150.00	-49.94	4.66	-45.28	-25.00	20.28	Horizontal
7725.00	-51.25	13.24	-38.01	-25.00	13.01	Horizontal
10300.00	-51.47	18.46	-33.01	-25.00	8.01	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5190.00	-50.01	4.76	-45.25	-25.00	20.25	Vertical
7785.00	-51.40	13.48	-37.92	-25.00	12.92	Vertical
10380.00	-51.86	17.85	-34.01	-25.00	9.01	Vertical
5190.00	-50.14	4.76	-45.38	-25.00	20.38	Horizontal
7785.00	-51.68	13.48	-38.20	-25.00	13.20	Horizontal
10380.00	-51.16	17.85	-33.31	-25.00	8.31	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5230.00	-50.13	4.95	-45.18	-25.00	20.18	Vertical
7845.00	-51.34	13.48	-37.86	-25.00	12.86	Vertical
10460.00	-52.29	18.39	-33.90	-25.00	8.90	Vertical
5230.00	-49.83	4.95	-44.88	-25.00	19.88	Horizontal
7845.00	-51.46	13.48	-37.98	-25.00	12.98	Horizontal
10460.00	-50.86	18.39	-32.47	-25.00	7.47	Horizontal

Band n38(40MHz)-SCS 30kHz						
20MHz(1@0) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5160.00	-50.14	4.71	-45.43	-25.00	20.43	Vertical
7740.00	-51.32	13.32	-38.00	-25.00	13.00	Vertical
10320.00	-52.16	18.30	-33.86	-25.00	8.86	Vertical
5160.00	-49.61	4.71	-44.90	-25.00	19.90	Horizontal
7740.00	-51.65	13.32	-38.33	-25.00	13.33	Horizontal
10320.00	-51.85	18.30	-33.55	-25.00	8.55	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5190.00	-50.24	4.76	-45.48	-25.00	20.48	Vertical
7785.00	-50.89	13.48	-37.41	-25.00	12.41	Vertical
10380.00	-52.09	17.85	-34.24	-25.00	9.24	Vertical
5190.00	-49.19	4.76	-44.43	-25.00	19.43	Horizontal
7785.00	-51.23	13.48	-37.75	-25.00	12.75	Horizontal
10380.00	-51.36	17.85	-33.51	-25.00	8.51	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5200.00	-49.98	4.86	-45.12	-25.00	20.12	Vertical
7800.00	-51.12	13.49	-37.63	-25.00	12.63	Vertical
10400.00	-52.09	18.21	-33.88	-25.00	8.88	Vertical
5200.00	-49.31	4.86	-44.45	-25.00	19.45	Horizontal
7800.00	-51.69	13.49	-38.20	-25.00	13.20	Horizontal
10400.00	-51.86	18.21	-33.65	-25.00	8.65	Horizontal

Band n41(10MHz)-SCS 15kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5080.02	-50.67	4.56	-46.11	-25.00	21.11	Vertical
7620.03	-51.21	13.14	-38.07	-25.00	13.07	Vertical
10160.04	-51.46	16.89	-34.57	-25.00	9.57	Vertical
5080.02	-49.14	4.56	-44.58	-25.00	19.58	Horizontal
7620.03	-51.68	13.14	-38.54	-25.00	13.54	Horizontal
10160.04	-50.78	16.89	-33.89	-25.00	8.89	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5190.00	-50.75	4.76	-45.99	-25.00	20.99	Vertical
7785.00	-51.10	13.48	-37.62	-25.00	12.62	Vertical
10380.00	-51.46	18.00	-33.46	-25.00	8.46	Vertical
5190.00	-48.83	4.76	-44.07	-25.00	19.07	Horizontal
7785.00	-51.26	13.48	-37.78	-25.00	12.78	Horizontal
10380.00	-51.00	18.00	-33.00	-25.00	8.00	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5299.98	-50.43	5.50	-44.93	-25.00	19.93	Vertical
7949.97	-51.40	13.31	-38.09	-25.00	13.09	Vertical
10599.96	-51.42	19.50	-31.92	-25.00	6.92	Vertical
5299.98	-48.99	5.50	-43.49	-25.00	18.49	Horizontal
7949.97	-51.09	13.31	-37.78	-25.00	12.78	Horizontal
10599.96	-50.65	19.50	-31.15	-25.00	6.15	Horizontal



Band n41(50MHz)-SCS 15kHz						
50MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5120.04	-50.27	4.56	-45.71	-25.00	20.71	Vertical
7680.06	-50.84	13.29	-37.55	-25.00	12.55	Vertical
10240.08	-50.98	16.93	-34.05	-25.00	9.05	Vertical
5120.04	-49.21	4.56	-44.65	-25.00	19.65	Horizontal
7680.06	-51.36	13.29	-38.07	-25.00	13.07	Horizontal
10240.08	-51.06	16.93	-34.13	-25.00	9.13	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5190.00	-50.65	4.76	-45.89	-25.00	20.89	Vertical
7785.00	-50.77	13.48	-37.29	-25.00	12.29	Vertical
10380.00	-51.13	18.00	-33.13	-25.00	8.13	Vertical
5190.00	-49.03	4.76	-44.27	-25.00	19.27	Horizontal
7785.00	-51.11	13.48	-37.63	-25.00	12.63	Horizontal
10380.00	-51.36	18.00	-33.36	-25.00	8.36	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5259.96	-50.73	5.41	-45.32	-25.00	20.32	Vertical
7889.94	-50.37	13.33	-37.04	-25.00	12.04	Vertical
10519.92	-51.15	19.67	-31.48	-25.00	6.48	Vertical
5259.96	-49.19	5.41	-43.78	-25.00	18.78	Horizontal
7889.94	-50.89	13.33	-37.56	-25.00	12.56	Horizontal
10519.92	-51.22	19.67	-31.55	-25.00	6.55	Horizontal

Band n41(10MHz)-SCS 30kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5080.02	-50.50	4.56	-45.94	-25.00	20.94	Vertical
7620.03	-51.28	13.14	-38.14	-25.00	13.14	Vertical
10160.04	-51.86	16.89	-34.97	-25.00	9.97	Vertical
5080.02	-49.55	4.56	-44.99	-25.00	19.99	Horizontal
7620.03	-51.24	13.14	-38.10	-25.00	13.10	Horizontal
10160.04	-51.18	16.89	-34.29	-25.00	9.29	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5190.00	-50.11	4.76	-45.35	-25.00	20.35	Vertical
7785.00	-51.68	13.48	-38.20	-25.00	13.20	Vertical
10380.00	-51.63	18.00	-33.63	-25.00	8.63	Vertical
5190.00	-49.47	4.76	-44.71	-25.00	19.71	Horizontal
7785.00	-51.65	13.48	-38.17	-25.00	13.17	Horizontal
10380.00	-51.4	18.00	-33.40	-25.00	8.40	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5299.98	-50.35	5.50	-44.85	-25.00	19.85	Vertical
7949.97	-50.92	13.31	-37.61	-25.00	12.61	Vertical
10599.96	-51.82	19.50	-32.32	-25.00	7.32	Vertical
5299.98	-49.20	5.50	-43.70	-25.00	18.70	Horizontal
7949.97	-51.46	13.31	-38.15	-25.00	13.15	Horizontal
10599.96	-51.65	19.50	-32.15	-25.00	7.15	Horizontal

Band n41(100MHz)-SCS 30kHz						
100MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5170.02	-51.03	4.56	-46.47	-25.00	21.47	Vertical
7755.03	-50.42	13.29	-37.13	-25.00	12.13	Vertical
10340.04	-52.33	16.93	-35.40	-25.00	10.40	Vertical
5170.02	-49.23	4.56	-44.67	-25.00	19.67	Horizontal
7755.03	-51.40	13.29	-38.11	-25.00	13.11	Horizontal
10340.04	-50.63	16.93	-33.70	-25.00	8.70	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5190.00	-50.99	4.76	-46.23	-25.00	21.23	Vertical
7785.00	-50.31	13.48	-36.83	-25.00	11.83	Vertical
10380.00	-51.93	18.00	-33.93	-25.00	8.93	Vertical
5190.00	-49.26	4.76	-44.50	-25.00	19.50	Horizontal
7785.00	-50.91	13.48	-37.43	-25.00	12.43	Horizontal
10380.00	-50.98	18.00	-32.98	-25.00	7.98	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
5209.98	-50.58	5.41	-45.17	-25.00	20.17	Vertical
7814.97	-50.70	13.33	-37.37	-25.00	12.37	Vertical
10419.96	-51.62	19.67	-31.95	-25.00	6.95	Vertical
5209.98	-49.47	5.41	-44.06	-25.00	19.06	Horizontal
7814.97	-51.08	13.33	-37.75	-25.00	12.75	Horizontal
10419.96	-51.19	19.67	-31.52	-25.00	6.52	Horizontal

Band n77(3450MHz ~ 3550MHz) (10MHz)-SCS 15kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
6910.02	-50.77	10.75	-40.02	-13.00	27.02	Vertical
10365.03	-52.10	17.40	-34.70	-13.00	21.70	Vertical
13820.04	-50.39	23.61	-26.78	-13.00	13.78	Vertical
6910.02	-50.19	10.75	-39.44	-13.00	26.44	Horizontal
10365.03	-51.70	17.40	-34.30	-13.00	21.30	Horizontal
13820.04	-50.29	23.61	-26.68	-13.00	13.68	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
6999.99	-50.54	10.51	-40.03	-13.00	27.03	Vertical
10499.99	-51.94	18.37	-33.57	-13.00	20.57	Vertical
13999.98	-50.30	25.38	-24.92	-13.00	11.92	Vertical
6999.99	-50.10	10.51	-39.59	-13.00	26.59	Horizontal
10499.99	-52.11	18.37	-33.74	-13.00	20.74	Horizontal
13999.98	-49.96	25.38	-24.58	-13.00	11.58	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7089.99	-50.74	11.50	-39.24	-13.00	26.24	Vertical
10634.99	-51.72	18.87	-32.85	-13.00	19.85	Vertical
14179.98	-49.83	26.86	-22.97	-13.00	9.97	Vertical
7089.99	-49.87	11.50	-38.37	-13.00	25.37	Horizontal
10634.99	-52.50	18.87	-33.63	-13.00	20.63	Horizontal
14179.98	-49.76	26.86	-22.90	-13.00	9.90	Horizontal

Band n77(3450MHz ~ 3550MHz) (50MHz)-SCS 15kHz						
50MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
6950.01	-50.50	10.50	-40.00	-13.00	27.00	Vertical
10425.02	-51.89	17.63	-34.26	-13.00	21.26	Vertical
13900.02	-49.99	24.60	-25.39	-13.00	12.39	Vertical
6950.01	-50.14	10.50	-39.64	-13.00	26.64	Horizontal
10425.02	-51.41	17.63	-33.78	-13.00	20.78	Horizontal
13900.02	-49.88	24.60	-25.28	-13.00	12.28	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
6999.99	-50.15	10.49	-39.66	-13.00	26.66	Vertical
10499.99	-52.33	18.21	-34.12	-13.00	21.12	Vertical
13999.98	-50.36	25.38	-24.98	-13.00	11.98	Vertical
6999.99	-49.86	10.49	-39.37	-13.00	26.37	Horizontal
10499.99	-51.72	18.21	-33.51	-13.00	20.51	Horizontal
13999.98	-50.29	25.38	-24.91	-13.00	11.91	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7050.00	-50.74	11.08	-39.66	-13.00	26.66	Vertical
10575.00	-51.65	18.53	-33.12	-13.00	20.12	Vertical
14100.00	-50.26	26.24	-24.02	-13.00	11.02	Vertical
7050.00	-49.70	11.08	-38.62	-13.00	25.62	Horizontal
10575.00	-52.64	18.53	-34.11	-13.00	21.11	Horizontal
14100.00	-50.03	26.24	-23.79	-13.00	10.79	Horizontal

Band n77(3450MHz ~ 3550MHz) (10MHz)-SCS 30kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
6910.02	-50.94	10.75	-40.19	-13.00	27.19	Vertical
10365.03	-52.19	17.58	-34.61	-13.00	21.61	Vertical
13820.04	-49.99	23.61	-26.38	-13.00	13.38	Vertical
6910.02	-49.92	10.75	-39.17	-13.00	26.17	Horizontal
10365.03	-51.53	17.58	-33.95	-13.00	20.95	Horizontal
13820.04	-49.94	23.61	-26.33	-13.00	13.33	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7000.02	-50.84	10.49	-40.35	-13.00	27.35	Vertical
10500.03	-51.87	18.21	-33.66	-13.00	20.66	Vertical
14000.04	-50.32	25.38	-24.94	-13.00	11.94	Vertical
7000.02	-50.07	10.49	-39.58	-13.00	26.58	Horizontal
10500.03	-51.45	18.21	-33.24	-13.00	20.24	Horizontal
14000.04	-49.87	25.38	-24.49	-13.00	11.49	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7089.96	-50.57	11.50	-39.07	-13.00	26.07	Vertical
10634.94	-51.48	18.71	-32.77	-13.00	19.77	Vertical
14179.92	-50.66	26.86	-23.80	-13.00	10.80	Vertical
7089.96	-49.83	11.50	-38.33	-13.00	25.33	Horizontal
10634.94	-51.47	18.71	-32.76	-13.00	19.76	Horizontal
14179.92	-49.80	26.86	-22.94	-13.00	9.94	Horizontal

Band n77(3450MHz ~ 3550MHz) (100MHz)-SCS 30kHz						
100MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7000.02	-50.12	10.49	-39.63	-13.00	26.63	Vertical
10500.03	-51.25	18.21	-33.04	-13.00	20.04	Vertical
14000.04	-51.15	25.38	-25.77	-13.00	12.77	Vertical
7000.02	-49.78	10.49	-39.29	-13.00	26.29	Horizontal
10500.03	-51.28	18.21	-33.07	-13.00	20.07	Horizontal
14000.04	-50.14	25.38	-24.76	-13.00	11.76	Horizontal

Band n77(3700MHz ~ 3980MHz) (10MHz)-SCS 15kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7410.00	-51.29	12.64	-38.65	-13.00	25.65	Vertical
11115.00	-51.50	18.78	-32.72	-13.00	19.72	Vertical
14820.00	-51.59	26.68	-24.91	-13.00	11.91	Vertical
7410.00	-52.54	12.64	-39.90	-13.00	26.90	Horizontal
11115.00	-52.07	18.78	-33.29	-13.00	20.29	Horizontal
14820.00	-50.04	26.68	-23.36	-13.00	10.36	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7680.00	-51.47	12.84	-38.63	-13.00	25.63	Vertical
11520.00	-51.21	18.50	-32.71	-13.00	19.71	Vertical
15360.00	-51.66	24.94	-26.72	-13.00	13.72	Vertical
7680.00	-52.79	12.84	-39.95	-13.00	26.95	Horizontal
11520.00	-51.98	18.50	-33.48	-13.00	20.48	Horizontal
15360.00	-49.61	24.94	-24.67	-13.00	11.67	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7950.00	-51.39	16.92	-34.47	-13.00	21.47	Vertical
11925.00	-51.50	12.98	-38.52	-13.00	25.52	Vertical
15900.00	-52.06	22.31	-29.75	-13.00	16.75	Vertical
7950.00	-52.38	16.92	-35.46	-13.00	22.46	Horizontal
11925.00	-51.69	12.98	-38.71	-13.00	25.71	Horizontal
15900.00	-49.89	22.31	-27.58	-13.00	14.58	Horizontal



Band n77 Band n77(3700MHz ~ 3980MHz) (50MHz)-SCS 15kHz						
50MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7450.02	-51.01	12.49	-38.52	-13.00	25.52	Vertical
11175.03	-51.27	18.85	-32.42	-13.00	19.42	Vertical
14900.04	-51.26	26.90	-24.36	-13.00	11.36	Vertical
7450.02	-52.48	12.49	-39.99	-13.00	26.99	Horizontal
11175.03	-52.14	18.85	-33.29	-13.00	20.29	Horizontal
14900.04	-49.98	26.90	-23.08	-13.00	10.08	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7680.00	-50.86	12.84	-38.02	-13.00	25.02	Vertical
11520.00	-50.86	18.50	-32.36	-13.00	19.36	Vertical
15360.00	-50.86	24.94	-25.92	-13.00	12.92	Vertical
7680.00	-52.51	12.84	-39.67	-13.00	26.67	Horizontal
11520.00	-52.10	18.50	-33.60	-13.00	20.60	Horizontal
15360.00	-49.60	24.94	-24.66	-13.00	11.66	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7909.98	-51.12	17.07	-34.05	-13.00	21.05	Vertical
11864.97	-50.37	17.97	-32.40	-13.00	19.40	Vertical
15819.96	-51.35	18.75	-32.60	-13.00	19.60	Vertical
7909.98	-52.14	17.07	-35.07	-13.00	22.07	Horizontal
11864.97	-52.02	17.97	-34.05	-13.00	21.05	Horizontal
15819.96	-49.87	18.75	-31.12	-13.00	18.12	Horizontal

Band n77(3700MHz ~ 3980MHz) (10MHz)-SCS 30kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7410.00	-51.25	12.64	-38.61	-13.00	25.61	Vertical
11115.00	-51.44	18.78	-32.66	-13.00	19.66	Vertical
14820.00	-51.86	26.68	-25.18	-13.00	12.18	Vertical
7410.00	-52.08	12.64	-39.44	-13.00	26.44	Horizontal
11115.00	-52.03	18.78	-33.25	-13.00	20.25	Horizontal
14820.00	-50.31	26.68	-23.63	-13.00	10.63	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7680.00	-51.64	12.84	-38.80	-13.00	25.80	Vertical
11520.00	-51.32	18.50	-32.82	-13.00	19.82	Vertical
15360.00	-51.41	24.94	-26.47	-13.00	13.47	Vertical
7680.00	-51.88	12.84	-39.04	-13.00	26.04	Horizontal
11520.00	-51.59	18.50	-33.09	-13.00	20.09	Horizontal
15360.00	-50.36	24.94	-25.42	-13.00	12.42	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7950.00	-51.78	16.92	-34.86	-13.00	21.86	Vertical
11925.00	-51.01	12.98	-38.03	-13.00	25.03	Vertical
15900.00	-51.86	22.31	-29.55	-13.00	16.55	Vertical
7950.00	-51.94	16.92	-35.02	-13.00	22.02	Horizontal
11925.00	-51.82	12.98	-38.84	-13.00	25.84	Horizontal
15900.00	-50.76	22.31	-28.45	-13.00	15.45	Horizontal

Band n77(3700MHz ~ 3980MHz) (100MHz)-SCS 30kHz						
100MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7500.00	-51.66	12.48	-39.18	-13.00	26.18	Vertical
11250.00	-51.33	19.20	-32.13	-13.00	19.13	Vertical
15000.00	-51.50	25.36	-26.14	-13.00	13.14	Vertical
7500.00	-52.13	12.48	-39.65	-13.00	26.65	Horizontal
11250.00	-51.70	19.20	-32.50	-13.00	19.50	Horizontal
15000.00	-50.63	25.36	-25.27	-13.00	12.27	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7680.00	-51.71	12.84	-38.87	-13.00	25.87	Vertical
11520.00	-51.30	18.50	-32.80	-13.00	19.80	Vertical
15360.00	-51.98	24.94	-27.04	-13.00	14.04	Vertical
7680.00	-51.84	12.84	-39.00	-13.00	26.00	Horizontal
11520.00	-51.65	18.50	-33.15	-13.00	20.15	Horizontal
15360.00	-50.69	24.94	-25.75	-13.00	12.75	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7860.00	-52.03	13.20	-38.83	-13.00	25.83	Vertical
11790.00	-51.67	18.40	-33.27	-13.00	20.27	Vertical
15720.00	-51.60	20.34	-31.26	-13.00	18.26	Vertical
7860.00	-52.03	13.20	-38.83	-13.00	25.83	Horizontal
11790.00	-52.09	18.40	-33.69	-13.00	20.69	Horizontal
15720.00	-50.28	20.34	-29.94	-13.00	16.94	Horizontal

DC 5A-n78A(3450MHz ~ 3550MHz) (10MHz)-SCS 15kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
6910.02	-52.08	10.75	-41.33	-13.00	28.33	Vertical
10365.03	-52.24	17.40	-34.84	-13.00	21.84	Vertical
13820.04	-51.54	23.61	-27.93	-13.00	14.93	Vertical
6910.02	-51.65	10.75	-40.90	-13.00	27.90	Horizontal
10365.03	-51.62	17.40	-34.22	-13.00	21.22	Horizontal
13820.04	-50.14	23.61	-26.53	-13.00	13.53	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
6999.99	-52.11	10.51	-41.60	-13.00	28.60	Vertical
10499.99	-52.60	18.37	-34.23	-13.00	21.23	Vertical
13999.98	-51.46	25.38	-26.08	-13.00	13.08	Vertical
6999.99	-52.14	10.51	-41.63	-13.00	28.63	Horizontal
10499.99	-51.63	18.37	-33.26	-13.00	20.26	Horizontal
13999.98	-50.05	25.38	-24.67	-13.00	11.67	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7089.99	-52.41	11.50	-40.91	-13.00	27.91	Vertical
10634.99	-52.68	18.87	-33.81	-13.00	20.81	Vertical
14179.98	-50.99	26.86	-24.13	-13.00	11.13	Vertical
7089.99	-51.65	11.50	-40.15	-13.00	27.15	Horizontal
10634.99	-51.74	18.87	-32.87	-13.00	19.87	Horizontal
14179.98	-49.86	26.86	-23.00	-13.00	10.00	Horizontal

DC 5A-n78A(3450MHz ~ 3550MHz) (50MHz)-SCS 15kHz						
50MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
6950.01	-52.25	10.50	-41.75	-13.00	28.75	Vertical
10425.02	-52.20	17.63	-34.57	-13.00	21.57	Vertical
13900.02	-51.82	24.60	-27.22	-13.00	14.22	Vertical
6950.01	-51.93	10.50	-41.43	-13.00	28.43	Horizontal
10425.02	-51.16	17.63	-33.53	-13.00	20.53	Horizontal
13900.02	-49.94	24.60	-25.34	-13.00	12.34	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
6999.99	-52.74	10.49	-42.25	-13.00	29.25	Vertical
10499.99	-51.79	18.21	-33.58	-13.00	20.58	Vertical
13999.98	-51.57	25.38	-26.19	-13.00	13.19	Vertical
6999.99	-52.41	10.49	-41.92	-13.00	28.92	Horizontal
10499.99	-51.00	18.21	-32.79	-13.00	19.79	Horizontal
13999.98	-50.44	25.38	-25.06	-13.00	12.06	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7050.00	-52.28	11.08	-41.20	-13.00	28.20	Vertical
10575.00	-51.50	18.53	-32.97	-13.00	19.97	Vertical
14100.00	-51.51	26.24	-25.27	-13.00	12.27	Vertical
7050.00	-52.59	11.08	-41.51	-13.00	28.51	Horizontal
10575.00	-51.22	18.53	-32.69	-13.00	19.69	Horizontal
14100.00	-50.77	26.24	-24.53	-13.00	11.53	Horizontal

DC 5A-n78A(3450MHz ~ 3550MHz) (10MHz)-SCS 30kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
6910.02	-52.09	10.75	-41.34	-13.00	28.34	Vertical
10365.03	-51.79	17.58	-34.21	-13.00	21.21	Vertical
13820.04	-51.12	23.61	-27.51	-13.00	14.51	Vertical
6910.02	-51.19	10.75	-40.44	-13.00	27.44	Horizontal
10365.03	-51.68	17.58	-34.10	-13.00	21.10	Horizontal
13820.04	-50.07	23.61	-26.46	-13.00	13.46	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7000.02	-52.09	10.49	-41.60	-13.00	28.60	Vertical
10500.03	-51.63	18.21	-33.42	-13.00	20.42	Vertical
14000.04	-50.8	25.38	-25.42	-13.00	12.42	Vertical
7000.02	-51.53	10.49	-41.04	-13.00	28.04	Horizontal
10500.03	-51.57	18.21	-33.36	-13.00	20.36	Horizontal
14000.04	-49.79	25.38	-24.41	-13.00	11.41	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7089.96	-51.99	11.50	-40.49	-13.00	27.49	Vertical
10634.94	-51.49	18.71	-32.78	-13.00	19.78	Vertical
14179.92	-50.93	26.86	-24.07	-13.00	11.07	Vertical
7089.96	-51.01	11.50	-39.51	-13.00	26.51	Horizontal
10634.94	-51.75	18.71	-33.04	-13.00	20.04	Horizontal
14179.92	-50.13	26.86	-23.27	-13.00	10.27	Horizontal

DC 5A-n78A(3450MHz ~ 3550MHz) (100MHz)-SCS 30kHz						
100MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7000.02	-52.32	10.49	-41.83	-13.00	28.83	Vertical
10500.03	-51.58	18.21	-33.37	-13.00	20.37	Vertical
14000.04	-50.66	25.38	-25.28	-13.00	12.28	Vertical
7000.02	-50.73	10.49	-40.24	-13.00	27.24	Horizontal
10500.03	-51.31	18.21	-33.10	-13.00	20.10	Horizontal
14000.04	-49.61	25.38	-24.23	-13.00	11.23	Horizontal

DC 5A-n78A(3700MHz ~ 3800MHz) (10MHz)-SCS 15kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7410.00	-49.87	12.64	-37.23	-13.00	24.23	Vertical
11115.00	-52.37	18.78	-33.59	-13.00	20.59	Vertical
14820.00	-51.93	26.68	-25.25	-13.00	12.25	Vertical
7410.00	49.77	12.64	62.41	-13.00	-75.41	Horizontal
11115.00	-50.30	18.78	-31.52	-13.00	18.52	Horizontal
14820.00	-51.12	26.68	-24.44	-13.00	11.44	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7500.00	-50.00	12.48	-37.52	-13.00	24.52	Vertical
11250.00	-52.04	19.20	-32.84	-13.00	19.84	Vertical
15000.00	-51.69	25.36	-26.33	-13.00	13.33	Vertical
7500.00	49.71	12.48	62.19	-13.00	-75.19	Horizontal
11250.00	-49.96	19.20	-30.76	-13.00	17.76	Horizontal
15000.00	-50.67	25.36	-25.31	-13.00	12.31	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7590.00	-51.57	13.18	-38.39	-13.00	25.39	Vertical
11385.00	-51.98	18.42	-33.56	-13.00	20.56	Vertical
15180.00	49.48	23.31	72.79	-13.00	-85.79	Vertical
7590.00	-49.64	13.18	-36.46	-13.00	23.46	Horizontal
11385.00	-50.67	18.42	-32.25	-13.00	19.25	Horizontal
15180.00	-50.63	23.31	-27.32	-13.00	14.32	Horizontal



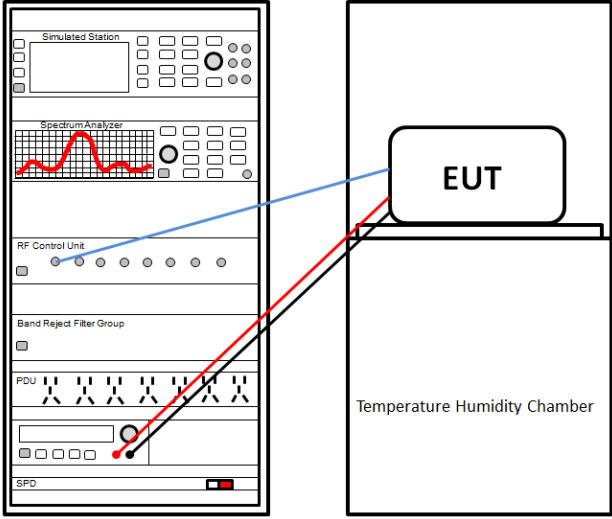
DC 5A-n78A(3700MHz ~ 3800MHz) (50MHz)-SCS 15kHz						
50MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7450.02	-50.19	12.49	-37.70	-13.00	24.70	Vertical
11175.03	-52.51	18.85	-33.66	-13.00	20.66	Vertical
14900.04	-51.75	26.90	-24.85	-13.00	11.85	Vertical
7450.02	49.86	12.49	62.35	-13.00	-75.35	Horizontal
11175.03	-49.94	18.85	-31.09	-13.00	18.09	Horizontal
14900.04	-51.35	26.90	-24.45	-13.00	11.45	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7500.00	-50.48	12.48	-38.00	-13.00	25.00	Vertical
11250.00	-52.42	19.20	-33.22	-13.00	20.22	Vertical
15000.00	-52.02	25.36	-26.66	-13.00	13.66	Vertical
7500.00	50.23	12.48	62.71	-13.00	-75.71	Horizontal
11250.00	-49.77	19.20	-30.57	-13.00	17.57	Horizontal
15000.00	-51.18	25.36	-25.82	-13.00	12.82	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7549.98	-50.30	12.72	-37.58	-13.00	24.58	Vertical
11324.97	-52.23	19.12	-33.11	-13.00	20.11	Vertical
15099.96	-52.11	24.92	-27.19	-13.00	14.19	Vertical
7549.98	50.24	12.72	62.96	-13.00	-75.96	Horizontal
11324.97	-49.79	19.12	-30.67	-13.00	17.67	Horizontal
15099.96	-51.33	24.92	-26.41	-13.00	13.41	Horizontal

DC 5A-n78A(3700MHz ~ 3800MHz) (10MHz)-SCS 30kHz						
10MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Lowest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7410.00	-50.02	12.64	-37.38	-13.00	24.38	Vertical
11115.00	-52.60	18.78	-33.82	-13.00	20.82	Vertical
14820.00	-51.45	26.68	-24.77	-13.00	11.77	Vertical
7410.00	49.32	12.64	61.96	-13.00	-74.96	Horizontal
11115.00	-50.65	18.78	-31.87	-13.00	18.87	Horizontal
14820.00	-51.36	26.68	-24.68	-13.00	11.68	Horizontal
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7500.00	-49.76	12.48	-37.28	-13.00	24.28	Vertical
11250.00	-52.25	19.20	-33.05	-13.00	20.05	Vertical
15000.00	-50.99	25.36	-25.63	-13.00	12.63	Vertical
7500.00	49.48	12.48	61.96	-13.00	-74.96	Horizontal
11250.00	-50.41	19.20	-31.21	-13.00	18.21	Horizontal
15000.00	-51.63	25.36	-26.27	-13.00	13.27	Horizontal
Highest						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7590.00	-49.76	13.18	-36.58	-13.00	23.58	Vertical
11385.00	-52.13	18.42	-33.71	-13.00	20.71	Vertical
15180.00	-51.31	23.31	-28.00	-13.00	15.00	Vertical
7590.00	49.45	13.18	62.63	-13.00	-75.63	Horizontal
11385.00	-50.50	18.42	-32.08	-13.00	19.08	Horizontal
15180.00	-51.46	23.31	-28.15	-13.00	15.15	Horizontal

DC 5A-n78A(3700MHz ~ 3800MHz) (100MHz)-SCS 30kHz						
100MHz(Edge_1RB_Left) for DFT-s-OFDM Pi/2 BPSK						
Middle						
Frequency (MHz)	Spurious Emission level (dBm)	Factor (dB)	Level at antenna terminals (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
7500.00	-50.04	12.48	-37.56	-13.00	24.56	Vertical
11250.00	-52.86	19.20	-33.66	-13.00	20.66	Vertical
15000.00	-51.45	25.36	-26.09	-13.00	13.09	Vertical
7500.00	49.06	12.48	61.54	-13.00	-74.54	Horizontal
11250.00	-50.80	19.20	-31.60	-13.00	18.60	Horizontal
15000.00	-50.91	25.36	-25.55	-13.00	12.55	Horizontal

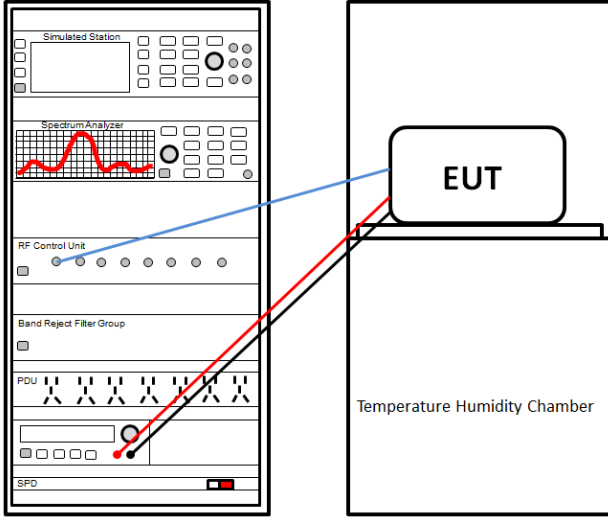
Note: Pre-Scan DC\_5A\_n78A, DC\_41A\_n78A, DC\_66A\_n78A mode, And found DC 5A-n78A was worst mode, the report only reflects the worst mode

### 6.6 Frequency stability V.S. Temperature measurement

Test Requirement:	Part 27.54, Part 2.1055(d)(2)
Limit:	Within authorized band for 5G NR n/38n41/n77
Test setup:	
Test procedure:	<ol style="list-style-type: none"> <li>1. The equipment under test was connected to an external DC power supply and input rated voltage.</li> <li>2. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators.</li> <li>3. The EUT was placed inside the temperature chamber.</li> <li>4. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency.</li> <li>5. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency.</li> <li>6. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached</li> </ol>
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

**Measurement Data:** Refer to Section 2 of Appendix A –5G NR

### 6.7 Frequency stability V.S. Voltage measurement

Test Requirement:	Part 27.54, Part 2.1055(d)(2)
Limit:	Within authorized band for 5G NR n38/n41/n77
Test setup:	
Test procedure:	<ol style="list-style-type: none"> <li>1. Set chamber temperature to 25°C. Use a variable DC power source to power the EUT and set the voltage to rated voltage.</li> <li>2. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.</li> <li>3. Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint, record the maximum frequency change.</li> </ol>
Test Instruments:	Refer to section 5.10 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

**Measurement Data:** Refer to Section 2 of Appendix A –5G NR

## 8 EUT Constructional Details

Reference to the test report No. JYTSZB-R12-2102863.

-----End of report-----